

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference 25470 WO	FOR FURTHER ACTION		See item 4 below
International application No. PCT/EP2004/001405	International filing date (<i>day/month/year</i>) 14 February 2004 (14.02.2004)	Priority date (<i>day/month/year</i>) 20 March 2003 (20.03.2003)	
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237			
Applicant SÜDZUCKER AKTIENGESELLSCHAFT MANNHEIM/OCHSENFURT			

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44bis.1(a).
2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the report
<input checked="" type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis.2).

Date of issuance of this report 22 February 2006 (22.02.2006)
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PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

PCT

Translation

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

Applicant's or agent's file reference 25470 WO		Date of mailing (day/month/year)
International application No. PCT/EP2004/001405		FOR FURTHER ACTION See paragraph 2 below
International filing date (day/month/year) 14.02.2004		Priority date (day/month/year) 20.03.2003
International Patent Classification (IPC) or both national classification and IPC		
Applicant SÜDZUCKER AKTIENGESELLSCHAFT MANNHEIM/OCHSENFURT		

1. This opinion contains indications relating to the following items:

- Box No. I Basis of the opinion
- Box No. II Priority
- Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- Box No. IV Lack of unity of invention
- Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Box No. VI Certain documents cited
- Box No. VII Certain defects in the international application
- Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP	Authorized officer
Facsimile No.	Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/001405

Box No. I

Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material

a sequence listing
 table(s) related to the sequence listing
 - b. format of material

in written format
 in computer readable form
 - c. time of filing/furnishing

contained in the international application as filed.
 filed together with the international application in computer readable form.
 furnished subsequently to this Authority for the purposes of search.
3. In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/EP2004/001405

Box No. II Priority

1. The following document has not yet been furnished:

copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).
 translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.

3. Additional observations, if necessary:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/EP2004/001405

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	1 - 31	YES
	Claims		NO
Inventive step (IS)	Claims	1 - 24, 26, 29	YES
	Claims	25, 27, 28, 30, 31	NO
Industrial applicability (IA)	Claims	1 - 31	YES
	Claims		NO

2. Citations and explanations:

1 In the present report, reference is made to the following document:

D1: KIM YONGCHEOL ET AL: "Isolation and characterization of cDNAs encoding the vacuolar H⁺-pyrophosphatase of Beta vulgaris" PLANT PHYSIOLOGY (ROCKVILLE), Vol. 106, No. 1, 1994, pages 375-382, XP002284824 ISSN: 0032-0889

2 Document D1 (the references in brackets relate to this document) discloses:

The cloning of cDNAs which code for vacuolar H⁺-pyrophosphatase (V-PPase) from *Beta vulgaris*.

2.1 INDEPENDENT CLAIM 25

In the light of document D1, the subject matter of independent claim 25 cannot be considered to be inventive (PCT Article 33(3)). The reasons for this are as follows:

Document D2 which is considered to be the closest

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

prior art discloses a nucleic acid molecule from which the subject matter of claim 25 differs in the point that a nucleic acid molecule having the SEQ ID NO: 6 is provided.

The object to be achieved by the present invention can thus be considered to be providing a nucleic acid molecule coding for a promoter of V-PPase.

The solution can be considered to be the provision of a nucleic acid molecule having the SEQ ID NO: 6.

However, methods are known generally to a person skilled in the art which permit him or her to obtain, starting from a cDNA, a nucleic acid molecule coding for a promoter.

The same applies *mutatis mutandis* to the nucleic acid molecule having the SEQ ID NO: 7.

DEPENDENT CLAIMS 27, 28, 30 AND 31

Dependent claims 27, 28, 30 and 31 do not contain any features which, in combination with the features of any claim to which they refer, meet the PCT requirements for inventive step.